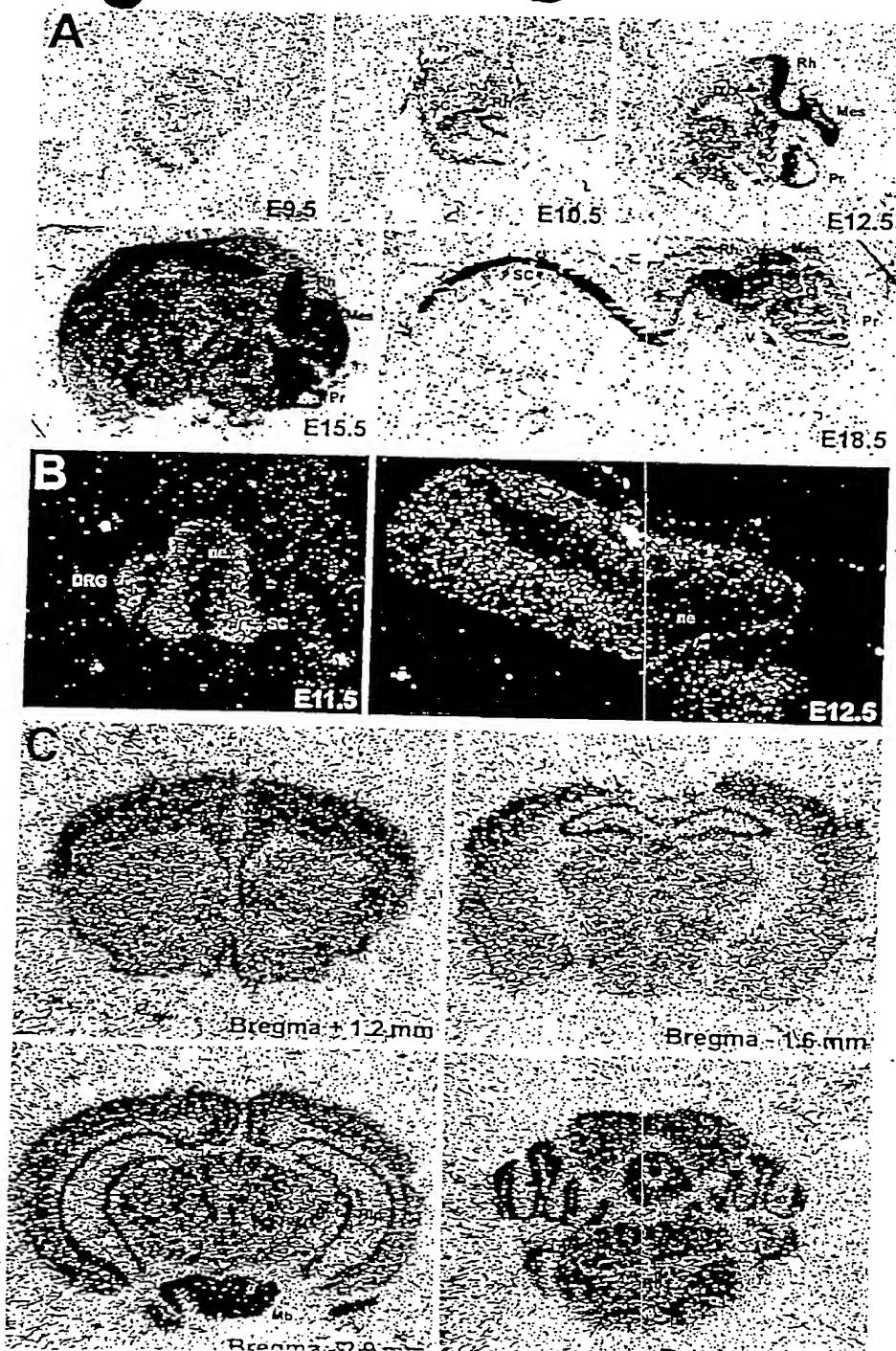


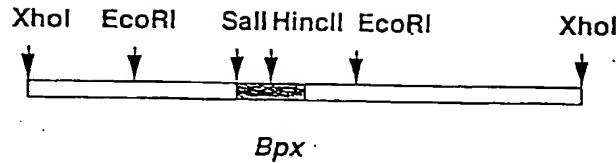
FIGURE



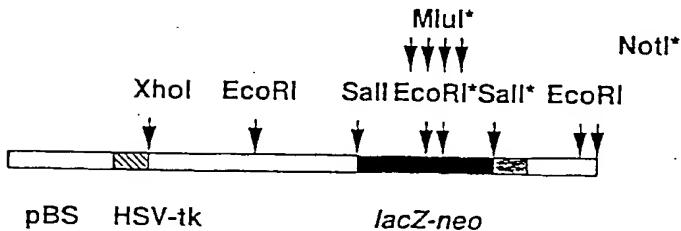
090847665 - 050301

098147565 • 050301

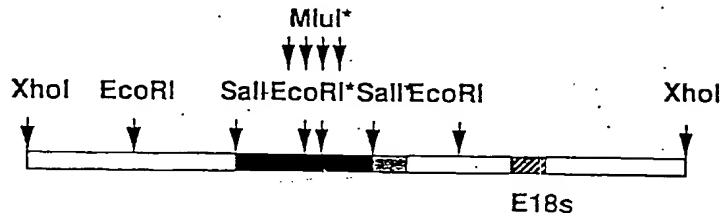
a



b



c



\* introduced sites

FIGURE 2

0000447665 - 050301

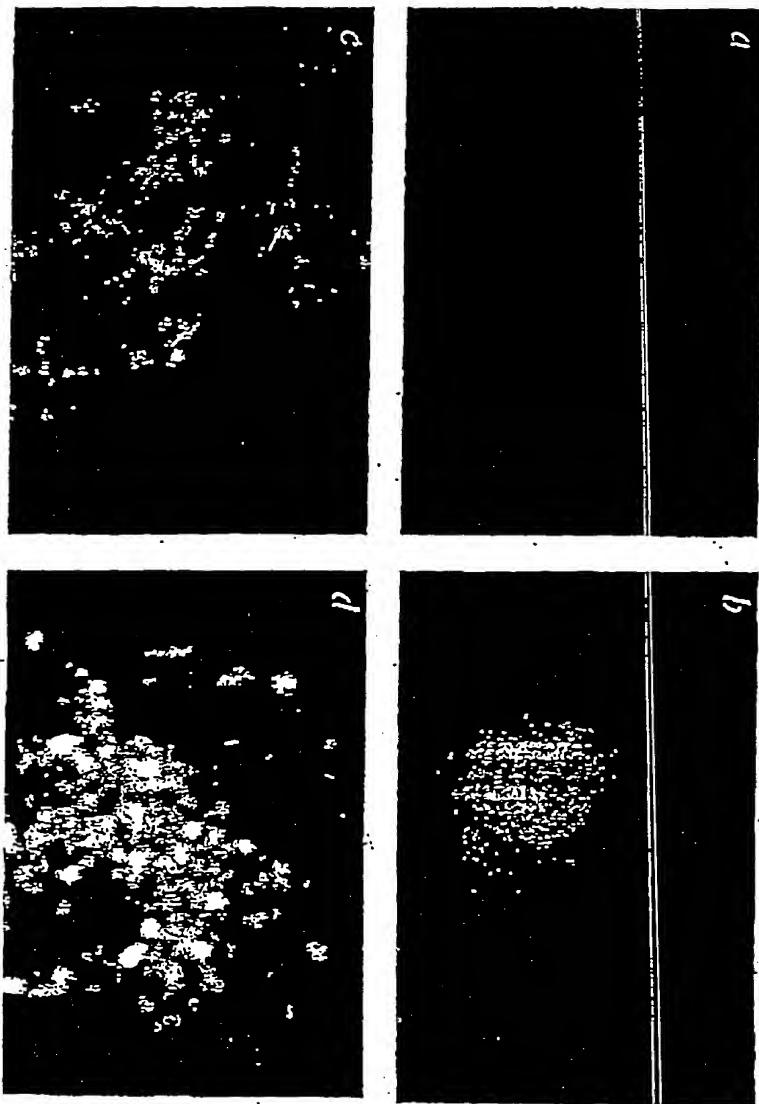


FIGURE 3

FIGURE 5.5.4.96

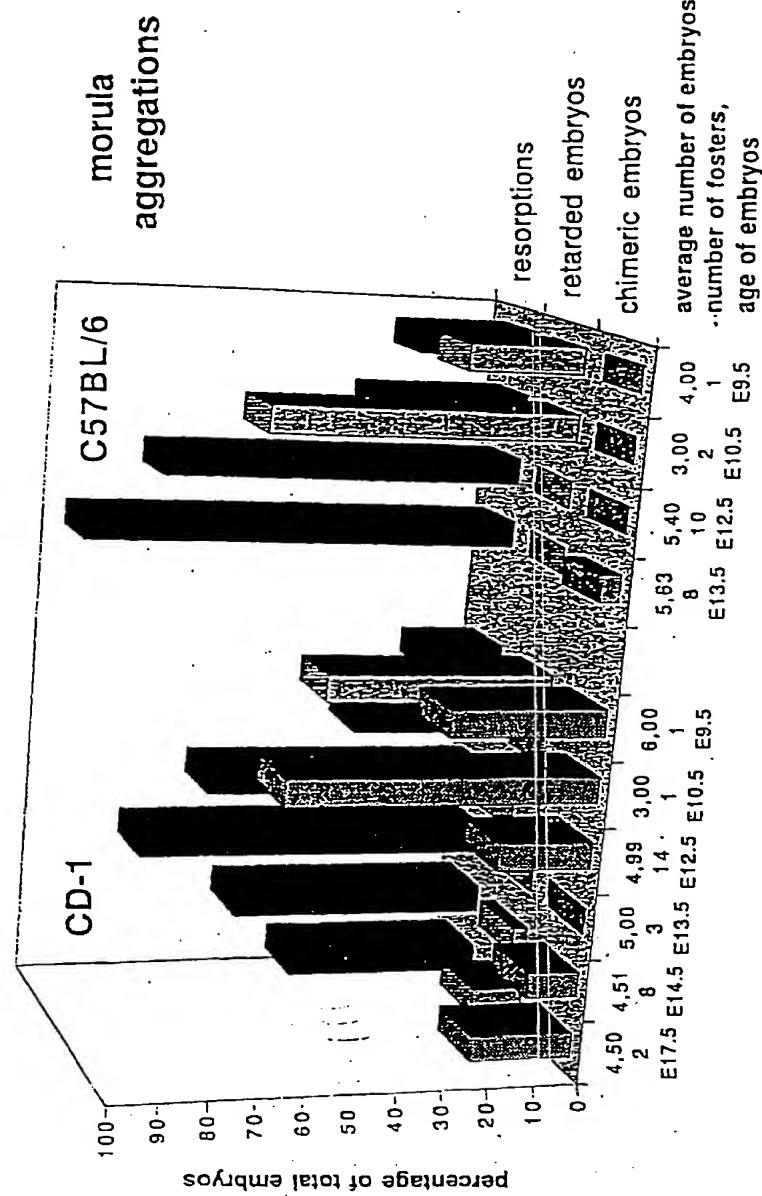


FIGURE 5.5.4.96

E17.5



E14.5



E12.5

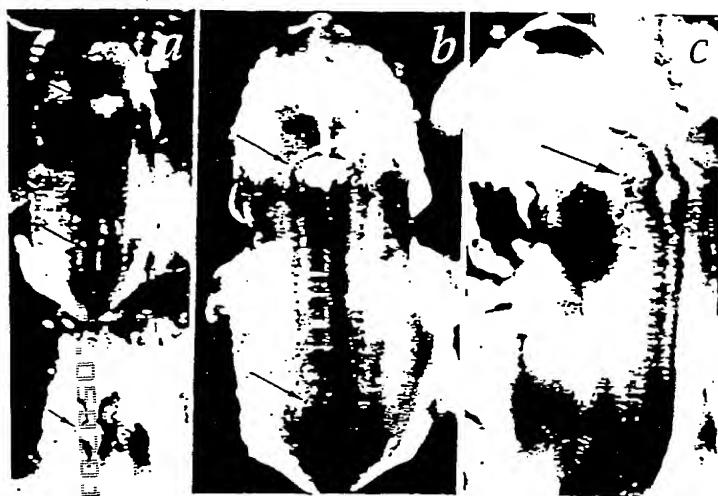


FIGURE 5

E10.5



E9.5



FIGURE 6

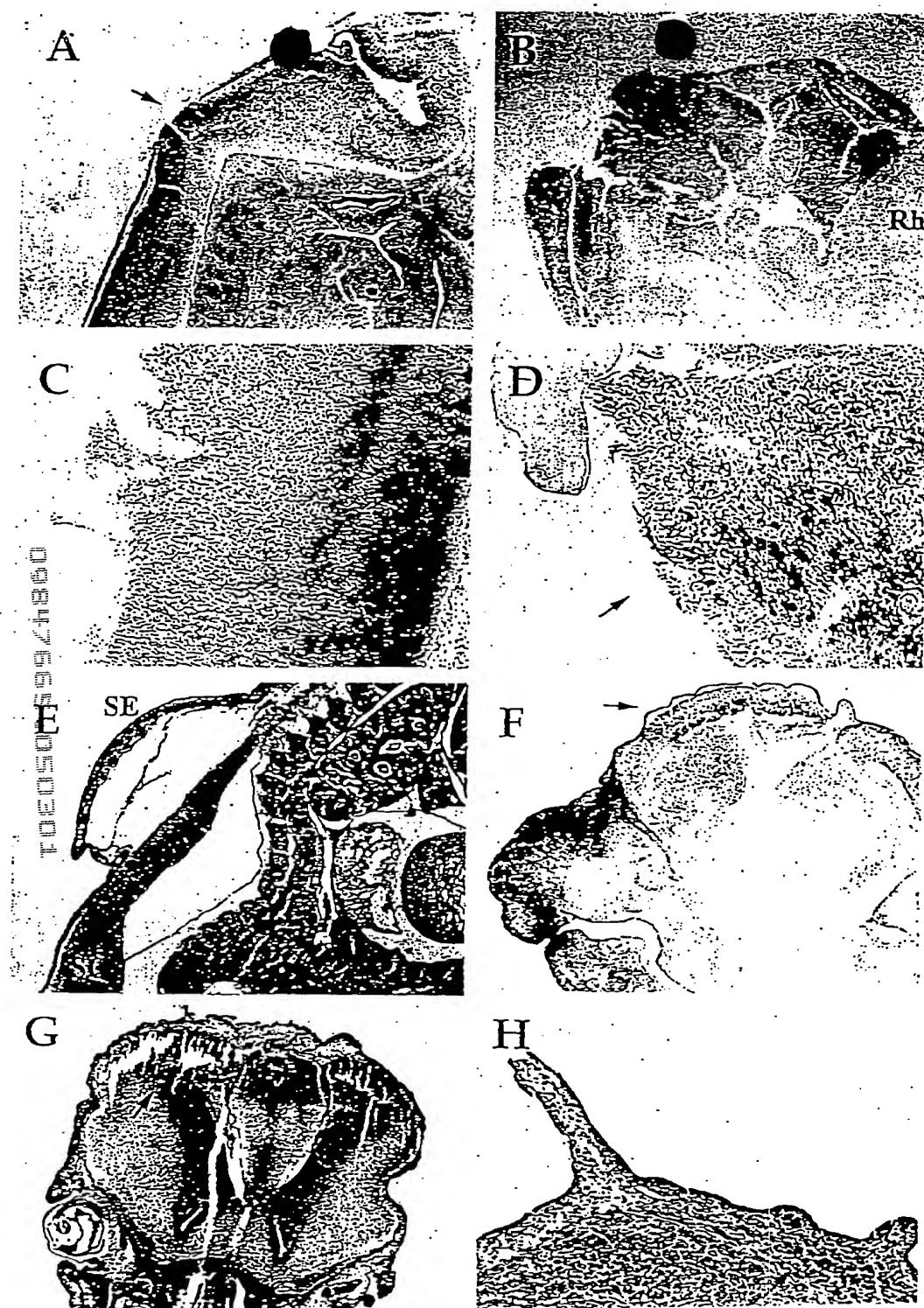


FIG. 7

Sequence clone *Bpx* promoter murine SpeI-SalI fragment

ACTAGTCATATAGCTGGCTCTTACAAAAGGCTTCAACACCCCCTCCCC  
CACACTTAGTCATCCGTATCTCTCCCTCATCAGGAATATTATGAGAA  
TTTCCCATTAAAATCACACAGGTTGTGAAAATTACAGAAACCAGGGTA  
AGAATATTAAACCACTGTCACTACATCCAAGGCCACCTATGCT  
TATTTTGGTAATTAAACCTCAAAGGATCTCTTGCGGCTCTCCACT  
ACCCCTCTCTTCCCAGAGCCTCAGGTATAACCAAGGGATAGACTA  
AAGACAATCCAGTACCTGCCATTTTTCACTCCITGTCACTGTTCCA  
TATAGCTCTTGAAATTATGAACATATAGTATCAGTTGAAAACGGAATG  
AATGATACTGCATTCTGAAAATTCCACAGGCTATAGGTGGAAGATG  
AGCCATAGGTGGAGGAATCAGCCATTAGAGAATCTGGGAAGGCAAG  
AGGTGTTGAAATTGATTCACTACTAATTACTGGCTCAGGATTGTC  
AATCACTGCAGCCTGGCAAATGAGATTAGAGAAGAGTCCCTGGGAGGG  
AGGGGTGACGCAGCAACCTGCATACACTTAAAAAAAGAGCTGAGAG  
ACAACCTGCGTAATCATACTGCGGCACCAAGTCCATCCCTCCGCCCC  
GAGTGGCTGGAGCAGCTGCTGCGGAGGTCTGCCACTGCGGCTCTG  
CAGTCTCTAGCCTGTTCCCTCAGGGCTAGAGTCTCCGCCAGACAGCCG  
GTTCAATTCTGCTATCCCAGCTTCAGCACCGTCTTATACTGCTGCTG  
CCTGCCATCAGTCAGCCGCCGCCCTTGGTCACTCTGCCAGATC  
ATCGCGCATCTGCTGTATTGGTAGAGTCTCCCTGCGGAGGTCAAGTCTCCT  
GATCTGCGGGCTAGCCACCATAAGTGCAGGCATCGTTGAAAACAAT  
GGCTGAATCAGTCGACCTCGAGGGGGGCGTACCTGCCATTTTCA  
TTCCTTGTCACTGTTCCATATAGCTTTGAAATTATGAACATATAGTA  
TCAGTTGAAAACGGAATGAATGATACTGCATTCTGCAAATTCCACAG  
GCTATAGGTGGAAGATGAGCCATAGGTGGAGGAATGCCATATTAGA  
GAATCTGGGAAGGCAAGAGGTGTGAAATTGATTCACTACTAATT  
CTGGCTCAGGATTGTCAATCACTGCAGCCTGGCAAATGAGATTAGAGA  
AGAGTCCCTGGGAGGGAAAGGGGTGACGCAGCAACCTGCATACACTAAA  
AAAAAAAGAGCTGAGAGACAACCTGCGTAATCATACTGCGGCACCAAGTCC  
TCCATCCCTCCGCCCGAGTGGCTGGAGCAGCTGCTGCGGAGGTCTG  
CCCACTGCGGCTCTGCACTCTAGCCTGTTCCCTCAGGGCTAGAGT  
CTCCGCCAGACAGCCGGTTCAATTCTGCTATCCCAGCTTCAGCACCCGT  
CTTTATCCCCACTGCTTGCTGCCATCAGTGCAGCCGCCGCC  
CTTGGTCACTCTGCCAGATCATGCGCATCTGCTGTATTGGTAGTCT  
TCCTGCGGGAGGTCAAGGTCTCCTGATCTGCGGGCTAGCCACCATAAGTG  
CAGGCGATCGTTGAAAACAATGGCTGAATCAGTCGAC

[SEQ ID NO:1]

FU0050 - 599441960

FIG. 8

Sequence Bpx murin cDNA identical to genomic DNA

GTACCTGCCATTTCATCCTGCACTGTTCCATATAGCTCTTT  
GAAATTATGAACATATAGTATCAGTGAAAACGGAATGAATGATACTGC  
ATTCCTGAAAATTCCACAGGCTATAGGGTGGAAAGATGAGCCATAGGTG  
GAGGAATCAGCCATATTAGAGAATCTGGGAAGGCAAGAGGTGTTGAAAT  
TTGATTCATCTACTAATTACTGGCTCAGGATTGTCAATCACTGCAGC  
CTGGCAAATGAGATTAGAGAAGAGTCCTGGGAGGGAGGGGTGACGCA  
GCAACCTGCATAACACTAAAAAAAGAGCTGAGAGACAACACTGCGTAAT  
CATACTGCGCACCACTTCCATCCCTCCGCCCCGAGTGGCTGGAG  
CAGCTGCTTGGGAGGTCTGCCACTGCGCTCTGCAGTCTTAGCCT  
GTTCTTCAGGGCTAGAGTCTCCGCCAGACAGCGGTTCAATTCTGC  
TATCCCAGCTTCAGCACCGCTTTATCCCCACTGCTTGTGCCATGCCATC  
AGTGCAGCCGCCGCCCTTGGTCACTCTGCCAGATCATCGCGCAT  
CTGCTGTATTGGTAGCTCTCTGCCAGGTCTGATCTGCG  
GCTTAGGCCACATAAGTGCAGGCGATCGTTGAAAACAATGGCTGAATC  
AGTCGACCATAAAGAACGTCTGAATCCAACCAAGAAGAGCTGCGCAGC  
CAGGTAAATGGCGGAGGGGCCGGGAAAGTCAGGACCGCAGTGAAGGT  
GTCTCATTGAGCCTGGAGATGGCGGCAACATGGTAAGAAACCGTGG  
CTGCTGGAGTAGGGGAAGAGGGAAAAGGTGAAGAAGCTGCTGCAGGGT  
CTGGGAAGATGCTGGGAAGTGCAGGACTGATGAGGACTCAGACT  
CAGACCGTCAAAGGACTTATCGTTATCTTGTAGATACCGATTGTT  
GAAAGTCTCCAGTGAAGTTAAGTGCAGTGCTAGCTTAAAGC  
TCAAACAAGAGCTGCCATTGGAATCGAAATTCTGAGGGAAATTCT  
GACATTGAAAGGAAGTTGCTGAAATGTACCAACCTTACTAGAAAAAA  
GACGACAGATCATCAATGCAGTCTATGAGCCCACAGAAGAGGAATGTGA  
GTATAAATCGGACTGTGAGGACTATTGTAGGGAGGAGATGGATGAGGAG  
GAAGAGACTAACGGCAACGAAGACGGTATGGTCATGAATACGTGGAT  
GAAGATGATGGTTATGAGGACTGTTATTATGATTATGATGACGAGGAAG  
AAGAGGAGGAGGAAGATGACAGCGCTGGGCCACCGGAGGAGAAGAG  
GTTAACGAAGAGGGATCTAAAGGGATTCCGGATTTGGTACTGTTT  
AAAAAAATGTTGAAGCACTCACTCTATGATTAAGAAATATGATGAGCCT  
ATTCTGAAGCTGCTGACAGATATTAAAGTGAAGCTTCGGATCCGGGG  
AGCCTCTCAGCTCACACTCGAATTCACTCAAGCCCAATGAATATT  
AAAAATGAGCTGTTGACAAAGACTTATGIGCTGAAGTCAAAGCTGCT  
GCTACGATCCCCACCCCTATAGGGGAAGTGCCTTGTGAGTACGCCACTGG  
CTGCGACATAGATTGGAACGAAGGGAAAGAATGTCACTTGTGAGAACCAC  
AAGAAGAACGAGAGACATCGCTCTGGGAAGTGTCCGAACGTGACTG  
AAGATTCTCCAAGGACTCTTCTCAATTCTCTCCTCATGGGATCA  
GCTTAAATGGAGGGGATGAAATGATGATTACTGGTCATAATCTG

FIG. 8 cont.

CGTACTTACATAATTCCAAGATCAGTGTATTTCTCAGGAGATGCACT  
TGAATCTCAGCAGGGGTAGTTAGGGAAGTTAATGACGAAATATAT  
GACAAAATTATTTATGATGATTGGATGGCTGCAATTGAAGAGGTTAAAG  
CCTGTTGCAAAAATCTTGAGGCATTAGTAGAAGATATTGATCGTTAAAC  
AGAGTAGATGCTTTGAAACTAACTGCTACATGCAGTTACTGAAGACA  
TAAGCAGTTAATATTGTTGTTCTGCATTTTCCCTGTCATGCCAGTT  
AAAAAATTCAAATACTAATTAATCTGACCTTGCATTGTAGTGGTATGATG  
TTTCAAGACATGTAGACTGTGATAAAATGATTAAGACATTAATAGTCTGT  
AGTATAACCCTCTGAAGTCTTGTGCCATGTATCTATTAAATCTGTGCT  
GTGAATATTATTAGAACATGCTAAATGAGATTATTGTTGCAAAGAAAAT  
ATTGGAAACCTACCTAACAGAGTGTCTTGCATTCCCCCTATCCTCTTAG  
TGCTTGGCCAATTGACTTTATTGTGCTGCTTCATTGCAAGTAAATATG  
CAGTAGAACCTAACATGAAATGCCTAACAGGGCTGCATATGATTGAGA  
ATTCAGGCAAATCATATTATTATTGATAACAGCTAGTGCAGGCTTC  
TGATTGTATGTGACTGTGATAAAATAATAAAACTCAATTGTATTGAAGTTA  
CTGTTTATCATTGACATGTGAGTTACAGTATTTCAAATGTGCAAATATT  
GTCCCTGTGTAATTGTGAAACTGTGATTACAGTGTACATTTCATAAT  
ATACTGAATCATTCAATTGAAATGGACACTTACCAATTCTGAAAATACAT  
TTCATATTCTGTTCACTGAAAAATAAAATGAATAAAATTT

[SEQ ID NO:2]

FIG. 9

**BPX human cDNA identical to genomic DNA**

TGTTAGAGAGCCTGGGAAGGTGAGcAGAGcTGAAAACITGATAGATCTA  
ATAATTACTGGCTCTGGGTTTGTCACTACATTGCAGCAAATGAGA  
TTAGAGCATAGTTGGGGAGGGAAAGGAGGTGACGCAGCAATCTATTG  
ACCTAGAAATTTAGGCAAGTGATAGCTCGTAATCATACTGCGGCACC  
GTTTTTCTTGCAAGTAGCTGCTGCGGAGGGAGGTGCCCCTGCA  
GCTCTGCACTGCTCCGGCTCTCTGCAGGATCGGTCAACGCAGCGT  
CGCCGCCCTCTGCACCCAGCCCAGGTCGCCACTGCTCAGTCCGGTTCTC  
AAAGCCTCAGCACCATCTTATCCCCGAGCAGCCTGGATCGTCGTTCCC  
TCAGTCCGGACGCCACTGCTAGGTCCGACCACCGCCGCTTCTGATATTG  
GGTGAGTCTTCTGTGGAGGTGGTCTCCGATCTCTGTGGTAGCCA  
CCCTAGGCGTGTACGGTCTTGA AAAAATGGCCGAGTCAGAGAACCGCA  
AGGAGCTGTCAGAATCCAGTCAAGAAGAGGCTGGTAATCAGATAATGGT  
GGAAGGGCTCGGGGAACATCTGGAGCGCGGTGAAGATGCCGCTGCTGG  
GCTTGGAGACGATGGGAAGTGCGGTGAAGAAGCTGCCGCTGGCTGG  
GGAAGAAGGGAAAACGGTGAAGATACTGCTGCTGGTCCGGGAAGA  
TGGGAAAAAAGGTGGCGATACTGATGAGGACTCAGAGGCAGACCGTCC  
AAAAGGACTTATC  
GGTATGTTAGATACAGACTTGTGAAAGTCTACCTGTGAAAGTTAA  
GTACCGTGTGTAGCCCTAAAAAGCTCAAACTAGAGCGGCCAATTAA  
GAATCCAATCTGAGGGAAATTCTGACATTGAAAGAAAGTTTGCTG  
AAATGTACCAACCTTACTGGAAAAAGACGTCAGATCATCAATGCAAT  
CTATGAACCTACAGAAGAGGAATGTGAATATAATCAGACTCTGAGGAC  
TGTGATGATGAGGAAATGTGTCATGAAGAGATGTATGGTAATGAGGAGG  
GTATGGTACATGAATATGTGGATGAGGACGATGGTTATGAGGACTATTA  
TTATGATTATGCTGTGGAAGAGGGAGGAGGAGGAGGAGGAGGAGGACGA  
CATTGAGGCTACTGGAGAAGAGAATAAAGAAGAGGAGGAGGATCTAAGGG  
AATTCTGATTTGGCTAACTGTTAAAAAACGTTGATACACTCACTC  
CTTGATTAAGAAATATGATGAGCCTATTCTGAAGCTCCTGACAGATATT  
AAAGTTAAGCTTCAAGATCC

FIG. 9 cont.

TGGCGAGCCCCCTCAGTTACACTAGAATTCACTTCAAACCCAATGAAT  
ATTCAAAAATG<sub>a</sub>GTGTTGACAAAGACCTATGTGCTGAAGTC<sub>a</sub>AGCTA  
GCATATTATGATCCCCATCCCTATAGGGGAAC<sub>t</sub>GCGATTGAGTATTCCAC  
AGGCTGTGAGATAGATTGGAATGAAGGAAAGAATGTCACTTGA<sub>a</sub>AAACC  
ATCAAGAAGAAACAGAAACATCGGATCTGGGAACAA<sub>t</sub>CCGAAC<sub>t</sub>GTAA  
CTGAAGATTTCCAAGGGATTCAATTTCATTTCAATTTCCTCCTCATGGAA  
TCACCTCAAATGGAAGGGATGGAATGATGATTTCAGGTGATGCA  
TTACGTACTTACATAATTCCAAGATCAGTATTATTTCTCAGGTGATGCA  
CTGGAATCTCAGCAGGAGGGGTAGTTAGAGAAGTTAATGATGCAATT  
ATGACAAAATTATTATGATAATTGGATGGCTGCAATTGAGGAAGTTAAA  
GCTTGTGCAAAAACCTTGAGGCATTAGTAGAAGACATGATCGTTAGA  
GCAGAGTATACATGGCCCTGAAATTAACT<sub>t</sub>gCCCTAGATATAGTTACTCAA  
GGTATAAGA<sub>a</sub>gCCTTGTGTTCTGTATT<sub>t</sub>gCTTGTAGTTAGTTAAAAC  
ATATGTTICAAAAAATATAAGAAAAGTTCAAAAAC<sub>t</sub>TAATTGACCTT  
GAGTTT<sub>t</sub>AGTAGTAGAATGTTCAAGAAATGTACACTGTTGAAATGAT  
TTAAAACACTAGTATAGTGTGTTAGCTTAATCCTCTGAAGTC<sub>t</sub>TTTG  
TCATGTAGCTATTAAATCTGTCATGAAATGATCAGAAATGCTAAGTGA  
GATCAATATTGTTGGAAAAAAATCTGGAAACAACCCAAGGGTTT  
CGCTGTGTTGTTCTTCTTCTTCTTCTTACTTAGCTCTTAGCTAG  
TGGATTAAATTGTTGCTGCTCATTTGCAATAACAA<sub>t</sub>ATGCACTGAG  
AATTAAAAC<sub>t</sub>GGATGCTTAAGAGGCCATATAGATAAGAATT<sub>t</sub>CAG  
GCAAAACTACATTATTGTAATAACAGCTGTTCAAGGCTCTTGTATT  
TATGTA<sub>t</sub>ACTGTGATAAATAATGAAAAC<sub>t</sub>AGTTATATTGAGGTATTGTT  
TGTGCGGTGAAGTGTAGTCACAGTATTTC<sub>a</sub>AAAGTTGACATATTGTT  
CTGTGTAATTGTGTAAGCCATAATTACAGTGT<sub>t</sub>TAATTCTCTTCTTCTATT  
ACATCAATTCAATTGAAAGTGTACACTTACCATTTGAAAAGATATT<sub>t</sub>CGT  
GTTCTTCACTGCAAAATAAAAAGAATAAAAATTCAAGAGTGTCTCATGG  
AATTCC

[SEQ ID NO:3]

FIG. 10

human *BPX* 5' region

ACTTAAAGGAAAAATTATCTATAAAGTACAGAATTAGAAATAAATA  
CAACAATATGTAAACAGTTAATATCTGTGATAGTAACAAATTCTTAA  
ATCTGGAAAATAATAGTCACTAAAATTAAAAATTGTTCAATTATA  
AATGATCCAAGTTAGAAATATGAACAAAATAAACCTCACCAATAATTAC  
TATAGAGAGGAAATTITAATTACTGCAAAGCTTCCATCCTATAAATACA  
TTATCAAATAGTTAACCATTTCTTAAATGCTGAGATTAGATTATTCCA  
ATTAACCTAAAAGCATCAAGCAAATGTTATGATTCTAAGAATAAACATA  
ACTTTCCATTGGCTTTGTATATATGTATATTCTAACGGCTGTTAAAG  
CCAGCATTAGAAGGAGAAGCAGAAAGTCAGTATTGGACTGGGTTAT  
TTATAAGCCAGGCAACTGGTAATTGGTTAATTGCTGGTATGTTAC  
TAGTCACGTAGTTGTATACACCATACTAGTTTTCATCACAGGCCCTCAT  
TCGCCCCCCTCGGCATCGGACTCCTCCTCCCTCACAGGAAATGTT  
TCGAGAATTTCACCTAAAATCATATAGCTTGTGAAAAATACCGACAA  
ACATAATATAGAATATTAAATAACTGACACGCCACCTAAAGACCATCA  
GTGCTAATTCCCTGGTGTTTAAATCTTGAAGCGTTGTTATCAGCTT  
CCACCATCCACCTCTCCCTCCCCCAGGTCCCCATCTAAAGAG  
ATTGATTAGGATGGTGGTGCTTGTCTCTCATTTGTCGACATT  
AGTTACGTTTCTGAGCTCTGGAAAGCATAAAAGTATAATATCTGT  
AAAAAGTTGGATGAATGAACTAATGAACGCAATGGGATTCCAGAAA  
CTGCGGGAGATGGCTAGAGGAGCAGGAGGAGGTGGATGAATCAGCA  
TGTTAGAGAGCCTGGGAAGGTGAGCAGAGTTGAAAACCTGATAG  
ATCTAATAATTACTGGCTCTGGTTTGTCACTACATTCAGCAAA  
TGAGATTAGAGCATAGTTGGGAGGGAAGGAGGTGACGCAGCAATCTA  
TTTGCACCTAGAAATTAGGCAAGTGTAGCTGCGTAATCATACTGCGG  
CACCGTTTTCTGAGCAGTAGCTGCTTGCGGAGGAGGTCTGCCAC  
TGCAGCTCTGAGCTCCGGCTCTCCTGCAGGATCGGTCAACGAG  
CCGTCGCCGCCCTCTGCACCCAGGCCAGGTGCCACTGCTCAGTCCGGT  
TCTCAAAGCCTCAGCACCATCTTATCCCCGAGCAGCCGGATCGTGT  
TCCCTCAGTCCGGACGCCACTGCTAGGTCCGACCACCGCCGCTTGTATA  
TTTCGGTGAGTCTTCTGAGGTGGATCTCCGATCTCTGTTGATA  
GCCACCTTAGGCGTGTACGGTCTTGTAAAAA

[SEQ ID NO:4]

09847655 - 050304

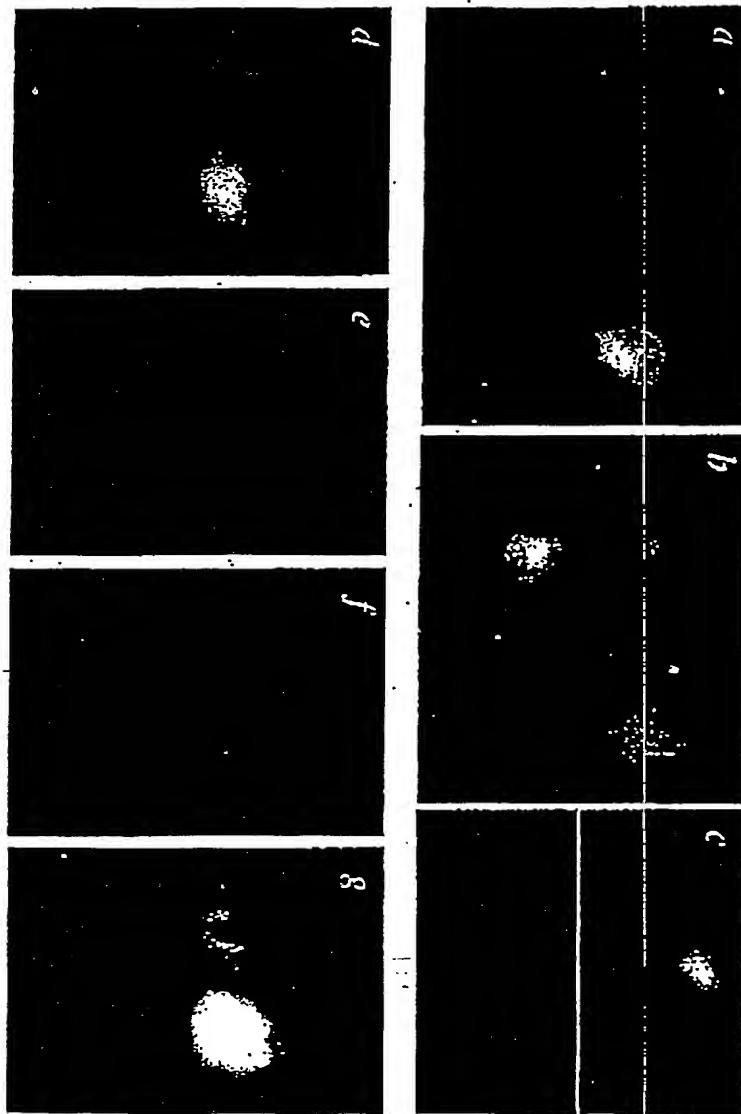
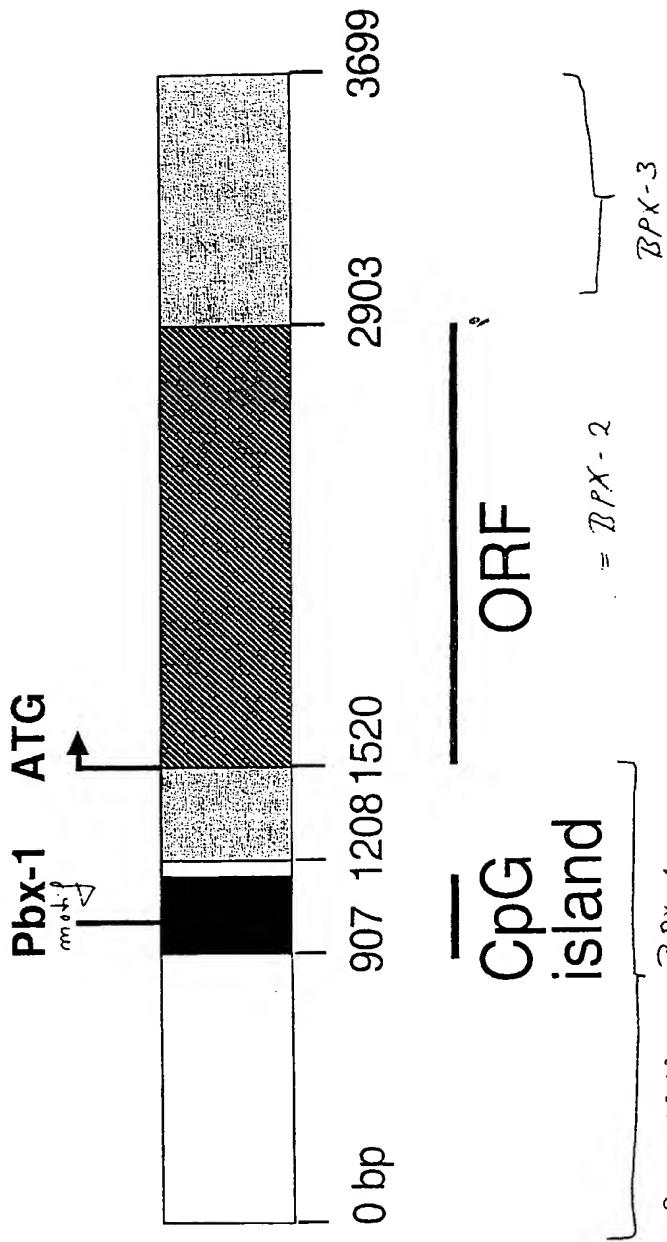


FIGURE 11

# Genomic structure of the *NAP1L2* gene



0 - 1519 =  $\beta$ *PX-1*  
promoter + 5' unknown poly A  
(1208 → 1519)